State Revolving Loan Fund

Clean Water

SRF

South Carolina's Integrated Priority Ranking System for Wastewater and Nonpoint Source Projects

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South Carolina Department of Health and Environmental Control

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I. Introduction

Since the enactment of the Federal Clean Water Act (CWA) in 1972, America has made significant strides in restoring the nation's waters to a "fishable and swimmable" condition. However, despite the progress that has been made, many waterways still remain unsafe for fishing and swimming.

During the 1970s and 1980s, the United States Environmental Protection Agency (EPA) provided grants for the construction of publicly owned wastewater treatment works. The construction grants program was replaced in 1987 with the Clean Water State Revolving Fund (CWSRF), which provides low interest loans for: 1) construction of "treatment works" as defined in Section 212 of the Act; 2) the implementation of nonpoint source management activities (Section 319 of the Act), and 3) the development and implementation of estuary comprehensive conservation and management plans (Section 320 of the Act). The construction grants and revolving fund programs have helped reduce the point source pollutants — e.g., from municipal wastewater treatment facilities — entering the State's waters. However, much work remains to be done to protect and restore the State's water resources to a "fishable and swimmable" condition — particularly in the area of nonpoint source pollution.

Nonpoint source water (NPS) pollution generally comes from numerous diffuse sources. Runoff occurring after a rain event may transport sediment from plowed fields, construction sites and logging operations, pesticides and fertilizers from farms and lawns, motor oil and grease deposited on roads and parking lots, or bacteria containing waste from agricultural animal facilities or malfunctioning septic systems. The rain moves the pollutants across the land to the nearest water body or storm drain where they may impact the water quality in creeks, rivers, lakes, estuaries and wetlands. Nonpoint source pollution may also impact groundwater when it is allowed to seep or percolate into aquifers. The adverse effects of NPS pollution include physical destruction of aquatic habitat, fish kills, interference with or elimination of recreational uses of a water body, closure of shellfish beds, reduced water supply or taste and odor problems in drinking water, and increased potential for flooding as waterbodies become choked with sediment.

In South Carolina, nonpoint source pollution is at least partially responsible for water quality degradation in streams, lakes, and estuaries. As required by Section 319 of the CWA, South Carolina has developed, and is currently implementing, a program focused on managing NPS pollution to protect and enhance water quality in the State. This program is described in a document published by DHEC entitled *South Carolina Nonpoint Source Management Program Update (1999)*. This document outlines the state's strategy for addressing statewide water quality impairments attributed to nonpoint source pollution discharges.

Nine categories of NPS pollution that impact South Carolina's water are identified in this document (i.e., agriculture, forestry, urban areas, marinas and recreational boating, mining, hydrologic modification, wetlands disturbance, land disposal/ groundwater impacts, and atmospheric deposition). The program describes specific management measures for each category.

The CWA requires that states develop a comprehensive list of potential projects to be funded from the CWSRF and rank them in priority order. When the CWSRF was first created, the primary focus was the funding of "treatment works" projects. As a result, the ranking system by which South Carolina prioritized and selected construction projects focused on municipal wastewater collection and treatment systems.

In 1996, a joint state/EPA workgroup issued a policy document entitled *The Clean Water State Revolving Fund Funding Framework: Funding to Solve Our Nation's Water Quality Problems*. The *Funding Framework* encourages all states to integrate their planning and priority setting systems, and recommends two alternatives for doing so: a goals approach, or an integrated ranking system. South Carolina has chosen the latter approach.

The purpose of this document is to outline the new ranking system, which integrates nonpoint source projects into the State's Comprehensive Priority List of Projects eligible for funding from the SRF. This ranking system is designed to equally evaluate municipal wastewater and nonpoint source projects and rank them according to water quality priorities.

II. Identifying and Ranking Water Quality Priorities

The South Carolina Department of Health and Environmental Control (DHEC), Bureau of Water, operates several programs which, to meet various program goals, address water quality priorities. The State's SRF program will employ a number of these Bureau programs to identify projects in the context of CWSRF funding priority. The following is a brief description of each program with an explanation of how DHEC will employ each of these programs to rank potential CWSRF projects. The ranking system will assign a numeric value to each project. The point system is not intended to give a unique value to each project, but rather rank projects according to relative importance. Please note that periodic reevaluation of the programs listed below will likely change South Carolina's water quality priorities. Such changes may modify the ranking of projects on the State's comprehensive list of potential CWSRF projects.

A. General

The first question that DHEC will ask when evaluating a project for ranking is, "how will the project help enhance water quality"? NPS projects must conform with the goals and objectives outlined in the 1999 update of South Carolina's NPS management program and they must also include appropriate water quality Best Management Practices (BMP). For point source projects, the answer will range from complying with stricter discharge limits as a result of revised wasteload allocations, to correcting infiltration problems that are causing sewer overflows and treatment problems, to rehabilitating equipment to comply, or ensure continued compliance, with existing permit limits. If this question is adequately addressed, the project will receive five (5) points. **However, no points will be assigned to a project which is intended solely for the anticipation of future growth; such projects will rank last in order of priority**.

B. South Carolina's 303(d) List of Impaired Waterbodies

South Carolina maintains an extensive water quality and macroinvertebrate community monitoring network that includes close to 1000 stations throughout the State. Data from this network are used to compile South Carolina's list of priority ranked waterbodies targeted for water quality management action under Section 303(d) of the CWA. This "303(d) List", which is updated every two years, is a compilation of waters that do not currently meet the water quality standards established for them. Water quality standards are established for each water body in the state in Regulation 61-68, *Water Classifications and Standards*

and Regulation 61-69, *Classified Waters*. These regulations were promulgated pursuant to the South Carolina Pollution Control Act (48-1-10, et seq, S.C. Code of Laws, 1996).

The process by which the 303(d) List is compiled and a list of the impaired water bodies is summarized in a document entitled *State of South Carolina Section 303(d) List for 2000, Priority-ranked Waterbodies Targeted for Water Quality Management Action, May 2, 2000*

As part of the "303(d) listing process", DHEC utilizes a point system for assigning a priority ranking to the waterbodies on South Carolina's 303(d) list. This point system ranks waterbodies based on the severity of the water quality impairment and the impaired use of the waterbody. The process involves an evaluation of each water body for all of the following factors:

- Potential impacts on endangered species;
- Severity of the pollution;
- Uses of the waterbody;
- Public support; and,
- Potential for primary contact recreation (swimming)

For more information concerning this point system, refer to Section 4 of South Carolina's 303(d) list document dated May 2, 2000. Based on the total numeric score, each impaired water body is given a priority ranking of 1, 2 or 3. The CWSRF program will use this priority ranking to assign points to potential CWSRF projects. A project will receive points as follows if it will help correct the identified water quality impairment in a 303(d)-listed waterbody.

Priority Ranking of the Impaired Waterbody in the 303(d) List	Points Assigned for Each Impairment
1	30
2	20
3	10

C. Implementation of an Approved Total Maximum Daily Load (TMDL)

Section 303 established the principle of the TMDL as a means of reducing water pollution in impaired waters. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards. A TMDL contains the reductions needed to meet water quality standards and allocates those reductions among the point and nonpoint sources in the watershed. The calculation includes a margin of safety to ensure that the waterbody can be used for the purposes that have been designated, and accounts for seasonal variation in water quality.

After a TMDL has been developed for a waterbody, it must be submitted to EPA for approval. The list of approved TMDLs for South Carolina may be found on the Department's website. Refer to scdhec.net/water/html/tmdlwtr.html. Once a TMDL is developed for the impairment (water quality parameter), the waterbody is removed from the 303(d) List for that impairment.

TMDLs are a very important step in the restoration of impaired waterbodies. Therefore, any proposed CWSRF project that will implement an approved TMDL will receive 40 points for each TMDL developed for the waterbody.

D. Unified Watershed Assessment and Watershed Restoration Action Strategies Discontinued

Beginning in 2001, EPA discontinued its emphasis on watershed restoration strategies under the former Clean Water Action Plan, in favor of reliance on TMDL development as the main driver of waterbody restoration. Since development of such strategies is no longer a condition of federal nonpoint source funding under Section 319, South Carolina has in turn discontinued this process. The process will therefore no longer be used as an element of the CWSRF Integrated Priority Ranking System.

E. Protecting Public and Private Drinking Water Supplies from Contamination

All aquifers in the state are protected under the *SC Water Classifications and Standards* (R.61-68). Most meet the definition of Class GB Groundwater Standards, thus are protected as potential sources for drinking water.

DHEC prepares and maintains an inventory of known groundwater contamination cases in the state. This effort is funded by a grant from EPA, authorized by Section 106 of the Clean Water Act. The criteria used to determine whether a site is listed in the inventory are the drinking water quality standards outlined in the State *Primary Drinking Water Regulations* (R.61-58) and the *SC Water Classification and Standards*. All sites where recent groundwater analytical data indicate that the Class GB standards have been exceeded are included in the most recent publication of the *South Carolina Groundwater Contamination Inventory*.

In 1996 the Federal Safe Drinking Water Act was amended to include a provision requiring states to develop and implement a Source Water Assessment Program (SWAP). The first phase of this program is to delineate the source water protection area (SWPA) for each surface water and groundwater source utilized by community and non-community public water systems in the state. The next step is to inventory potential sources of contamination within each delineated SWPA. The final step is to determine the susceptibility of each surface and groundwater source to contamination.

This program, which is in various stages of implementation, is outlined in a document entitled *South Carolina Source Water Assessment and Protection Program, February 1999.*

1. Protecting Public Drinking Water Supplies from Contamination

In implementing South Carolina's SWAP, DHEC will assess the susceptibility to contamination of each surface water intake and groundwater source used by public drinking water supplies. In accordance with South Carolina's EPA -approved SWAP, DHEC will

inventory potential contamination sources, including known groundwater contamination sites, within the SWPA for each surface and groundwater source and assign to each contaminant source a susceptibility ranking of "high", "moderate" or "low". This analysis thereby operates to inform a public water system that actions can be taken to reduce the susceptibility of its drinking water supply to contamination. Such actions could include borrowing money from the CWSRF to clean up a contamination site or upgrade a wastewater treatment plant to meet Class I Reliability Classification Requirements as outlined in South Carolina Regulation 61-67.

A project will receive points as follows if it will help reduce the susceptibility of a public drinking water source to contamination.

Susceptibility Ranking of the Contaminant Source	Points
High	15
Moderate	10
Low	5

A project will receive an additional 5 points if the contaminant source has already impacted the public drinking water source (e.g., contaminants from a leaking underground storage tank have been detected in water samples taken from a public water supply well). If any primary drinking water standards have been exceeded at the surface water intake or well, the project will receive an additional 5 points.

2. Protecting Private Drinking Water Wells from Contamination

A project that proposes to mitigate groundwater contamination that is expected to impact any private drinking water wells will receive 10 points. If a private well has already been impacted, the project will receive 5 additional points. If any primary drinking water standards have been exceeded at the well, the project will receive an additional 5 points.

III. Summary of Points System Used to Establish Project Priority Ranking

The following table summarizes the numeric ranking system for prioritizing potential CWSRF projects:

	Priority Ranking Criteria	If Yes, add the following point value to the Project
1	Is the project solely for the anticipation of future growth?	If the answer is yes, the project will not receive any points and will rank last in order of priority. Disregard the remaining questions in this table. If the answer is no, continue answering the following questions.
2	Will the project help enhance water quality?	5
3	Will the project correct the identified water quality impairment of a waterbody that is ranked priority 1 on the 303(d) list?	30 for each impairment
4	Will the project correct the identified water quality impairment of a waterbody that is ranked priority 2 on the 303(d) list?	20 for each impairment
5	Will the project correct the identified water quality impairment of a waterbody that is ranked priority 3 on the 303(d) list?	10 for each impairment
6	Will the project implement an approved TMDL?	40 for each TMDL
7	Will the project help reduce the susceptibility of a public drinking water source to contamination from a contaminant source with a high susceptibility ranking?	15
8	Will the project help reduce the susceptibility of a public drinking water source to contamination from a contaminant source with a moderate susceptibility ranking?	10
9	Will the project help reduce the susceptibility of a public drinking water source to contamination from a contaminant source with a low susceptibility ranking?	5
10	Has the contaminant source already impacted (contaminants detected) a surface water intake or well used by a public water system?	5
11	If the public water supply has been impacted, have any primary drinking water standards been exceeded at the source (surface water intake or well)?	5
12	Will the project mitigate groundwater contamination that is expected to impact any private wells?	10
13	Has the groundwater contamination already impacted a private well?	5
14	If a private well has been impacted, have any primary drinking water standards been exceeded at the well?	5

IV. Developing and Updating the State's Comprehensive Priority List of Projects

In order for a project to be considered for funding from the CWSRF, it must appear on the State's comprehensive priority list of projects. To be included in this list, an eligible project sponsor must complete a project questionnaire supplied by DHEC. A copy of the questionnaire may be found on DHEC's website at *http://www.scdhec.net/water/forms/d-3561.pdf*. (A project sponsor may submit a completed questionnaire to the SRF Section of DHEC's Bureau of Water at any time. Once the questionnaire is received, DHEC staff will evaluate the project based on the ranking system discussed above and assign the project a numeric score. The project will then be added to the comprehensive priority list

of projects. DHEC will maintain an updated list of projects on its website: http://www.scdhec.net/water/html/srf.html. Those projects with the same numerical score will be ranked based on the date the project questionnaire is received.

V. Eligible Project Sponsors

An eligible CWSRF project sponsor means a county, municipality, special purpose district, commissioners of public works, or any other public agency of the state that will own the project.

VI. Selecting Projects for Funding

DHEC will prepare an annual *Intended Use Plan* (IUP) that will describe how the State intends to use the funds in the CWSRF for the year and how those uses support the objectives of the CWA. The IUP will include a list of projects selected from the comprehensive priority list for funding during the next year. Once the IUP has been drafted, notice will be given to the public that the draft IUP is available for review and comment for a period of at least 30 days. Once the comment period has ended DHEC will review any comments received and make changes to the IUP as appropriate. Both the draft and final IUPs may be found on DHEC's website: http://www.scdhec.net/water/html/srf.html

Although a priority list is required, states are not required to select the highest ranked projects in any given year. Therefore, South Carolina will continue to fund projects on a "first come, first served" basis, making readiness to proceed a significant funding factor. However, at such time as demand for funding for projects ready to proceed exceeds the loan funds available in the CWSRF, ranking will take priority over readiness to proceed. Other factors may be considered for selecting projects when demand exceeds the funds available. Such factors will be explained in the annual IUP.

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Glossary of Abbreviations

303(d) List	List of priority-ranked waterbodies targeted for management action
BMP	Best Management Practices
CWA	Clean Water Act [Federal]
CWSRF	Clean Water State Revolving Fund
DHEC	[South Carolina] Department of Health and Environmental Control
EPA	[U.S.] Environmental Protection Agency
FY	Fiscal Year
NPDES	National Pollutant Discharge Elimination System
NPS	Nonpoint source [water pollution]
R.61-68	State Regulation 61-68 [Also R.61-69, R.61-58, etc.]
SRF	State Revolving Fund
SWAP	Source Water Assessment Program
SWPA	Source Water Protection Area
TMDL	Total Maximum Daily Load